

REMARKS

Claims 1-7 have been canceled without prejudice. Applicants present new claims 8-15 for examination.

With respect to the elastomer composition, claim 12 (corresponding to original claim 1), limits the carbon allotrope to “diamond.” With respect to the sealing material (corresponding to original claim 6) and filler (corresponding to original claim 7), claims 8 and 15 limit the carbon allotrope to a “crystalline” carbon allotrope. Support is found, for example, at page 4, lines 6-8 of the specification.

No new matter is added. Entry of the Amendment is respectfully requested.

Review and reconsideration on the merits are requested.

In response to the claim objection, claims 8-15 presented for examination do not contain parentheses. Withdrawal of the objection is respectfully requested.

Claims 1 and 3-5 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,503,171 to Stewart. Stewart was cited as disclosing an elastomer composition meeting each of the terms of the rejected claims, including a perfluoroelastomer and graphite having an average primary particle size of about from 0.01 nm to 10 nm.

Applicants respond as follows.

Claim 12 directed to a fluorine-containing elastomer composition (corresponding to claim 1 as originally filed) includes the limitation of original claim 2 (diamond having an average primary particle size of at most 0.1 μm) not disclosed by Stewart et al. Original claim 2 was not rejected over Stewart et al.

Withdrawal of the foregoing rejection under 35 U.S.C. § 102(b) is respectfully requested.

Claim 7 was rejected under 35 U.S.C. § 102(b) as being anticipated by Stewart.

Applicants respond as follows.

New claim 15 corresponds to claim 7 as originally filed, where the filler is limited to a crystalline carbon allotrope.

Stewart et al does not disclose a crystalline carbon allotrope, and therefore does not anticipate new claim 15.

Withdrawal of the foregoing rejection under 35 U.S.C. § 102(b) is respectfully requested.

Claims 1-5 were rejected under 35 U.S.C. § 102(b) as being anticipated by JP 2004-051937 A (JP ‘937).

Applicants respond as follows.

JP ‘937 discloses a polymer composite in which a nano-diamond is distributed in the polymer which may comprise polytetrafluoroethylene (paragraph [0001] and [0009]). That is, JP ‘937 discloses a nano-diamond that is used as a filler. However, there is no teaching in JP ‘937 of a fluorine-containing *elastomer* as a matrix that is to be filled. Although JP ‘937 discloses PTFE, PTFE is not an elastomer, but rather is a resin. As elastomers, JP ‘937 discloses only non-fluorine-containing elastomers such polyisoprene, polychloroprene, polybutadiene, acrylonitrile-butadiene copolymer and styrene-butadiene copolymer.

The fact that JP ‘937 has no disclosure or teaching as to a fluorine-containing elastomer shows that JP ‘937 does not suggest the problem to be solved by Applicants’ invention, e.g.,

resistance to NF₃ plasma, O₂ plasma and CF₄ plasma processing during semiconductor production, and therefore the solution thereof also is also unobvious over JP '937.

Withdrawal of the foregoing rejection under 35 U.S.C. § 103(a) is respectfully requested.

Claim 6 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Stewart as evidenced by U.S. Patent No. 5,461,107 to Amin et al. Claim 6 was also rejected under 35 U.S.C. § 103(a) as being unpatentable over JP '937 as evidenced by Amin et al.

Applicants respond as follows.

Claims 8 corresponds to claim 6 as originally filed, where the carbon allotrope is limited to a crystalline carbon allotrope.

Amin et al does not teach the problem to be solved that is encountered in semiconductor production apparatuses, such as impaired resistance to NF₃ plasma, O₂ plasma and CF₄ plasma processing. Of course, none of the other cited references address this problem as well.

Moreover, of the cited references teaches or suggests the characteristic feature of the invention in that when the sealing material comprises a crystalline carbon allotrope and a fluorine-containing elastomer, resistance to each of NF₃ plasma, O₂ plasma and CF₄ plasma processing can be improved altogether at the same time.

Withdrawal of the foregoing rejection under 35 U.S.C. § 103(a) is respectfully requested.

Withdrawal of all rejections and allowance of claims 8-15 is earnestly solicited.

In the event that the Examiner believes that it may be helpful to advance the prosecution of this application, the Examiner is invited to contact the undersigned at the local Washington, D.C. telephone number indicated below.

AMENDMENT UNDER 37 C.F.R. § 1.111
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Respectfully submitted,



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